AMENDMENTS TO THE SPECIFICATION

Please amend the paragraph beginning at page 18, line 15, as follows:

Unlabeled oligonucleotide hybridization probes complementary to the mRNA transcript of each yeast gene are arrayed on a silicon substrate etched by standard techniques (e.g., Fodor et al. (1991) Science [[252]] 251, 767). Fodor et al. describes a method of using solid-phase chemistry, photolabile protecting groups, and photolithography to achieve light-directed, spatially addressable parallel chemical synthesis to yield a highly diverse set of chemical products, such as oligonucleotides. Light-directed synthesis of peptides (e.g. pentapeptides) was also carried out in Fodor et al. (1991) using light-directed spatially addressable parallel chemical synthesis. In brief, as described in Fodor et al., oligonucleotides were produced using light-directed spatially addressable parallel nucleic acid synthesis. 5'-Nitroveratryl thymidine was attached to the surface of a glass substrate. After removal of the protecting group by illumination through a 500-μM checkerboard mask, the substrate was treated with a phosphoramidite-activated derivative of deoxycytidine. A fluorescent probe was then attached to the exocyclic NH_2 group of deoxycytidine. Light-activated formation of a thymidine-deoxycytidine dinucleotide was carried out as follows: 5'-Nitroveratryl thymidine was synthesized from the 3'-*O*-thymidine acetate as described in Ohtsuka E. et al., *Synthesis 453* (1977). After deprotection with base, the 5'-nitroveratryl thymidine was attached to an aminated substrate through a linkage to the 3'-hydroxyl group. The nitroveratryl protecting groups were removed by illumination through a 500-μM checkerboard mask. The substrate was then treated with phosphoramidite-activated 2'-deoxycytidine. In order to follow the reaction fluorometrically, the deoxycytidine had been modified with an FMOC-protected aminohexyl linker attached to the exocyclic amine {5'-*O*-(4,4'-dimethoxytrityl)-4-*N*-[6-*N*-fluorenylmethyl-carbamoylhexylcarboxy (FMOC)]-2'-deoxycytidine} (Roget A. et al., *Nucleic Acid Res 17*: 7643

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(1989)). After removal of the FMOC protecting group with base, the regions which contained the dinucleotide were fluorescently labeled by treatment of the substrate with 1 mM FITC in DMF for 1 hour. The oligonucleotide hybridization probes are of length and sequence to ensure specificity for the corresponding yeast gene, typically about 24-240 nucleotides in length.

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